

WHAT IS CLAIMED IS:

1. A display driving method of a simple matrix display
5 for performing a PWM control,

wherein a forward approach PWM signal voltage and a rearward approach PWM signal voltage can be selectively supplied as PWM signal voltages so as to be applied to signal electrodes, and

10 the PWM signal voltage to be applied to each of the signal electrodes within a predetermined period is controlled in such a manner that numbers of the forward approach PWM signal voltages and the rearward approach PWM signal voltages are almost equal to each other in relation to each scanning electrode.

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2. The display driving method according to claim 1, wherein the forward approach PWM signal voltage and the rearward approach PWM signal voltage are switched in every predetermined frame cycle.

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3. The display driving method according to claim 1, wherein the PWM signal voltage is applied to have a rearward/forward approach combination in which the rearward approach PWM signal voltage is applied to an odd-numbered scanning electrode and the forward approach PWM signal voltage is applied to an even-numbered scanning electrode and a forward/rearward approach combination in which the forward approach PWM signal voltage is applied to the odd-numbered scanning electrode and the rearward approach PWM signal voltage 25 is applied to the even-numbered scanning electrode.

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4. The display driving method according to any of claims 1 to 3, wherein the PWM signal voltage and a scanning voltage to be applied to the scanning electrode are alternated 35 synchronously to have a predetermined relationship with a frame cycle.

5. A display device comprising:

5 a simple matrix display provided with a plurality of signal electrodes and a plurality of scanning electrodes which are orthogonal to each other with an electrostatic capacity coupling display unit interposed therebetween;

10 a scanning side driving portion for sequentially scanning the scanning electrodes and supplying a scanning voltage; and

15 a signal side driving portion for supplying a PWM signal voltage to be a forward approach PWM signal voltage or a rearward approach PWM signal voltage to each of the signal electrodes synchronously with the scan of the scanning side driving portion,

15 wherein the signal side driving portion controls the PWM signal voltage in such a manner that numbers of the forward approach PWM signal voltages and the rearward approach PWM signal voltages are almost equal to each other within a predetermined period for each of the scanning electrodes.

6. The display device according to claim 5, wherein

20 the signal side driving portion switches the forward approach PWM signal voltage and the rearward approach PWM signal voltage in every predetermined frame cycle.

7. The display device according to claim 5 or 6, wherein

25 the signal side driving portion applies the PWM signal voltage to have a rearward/forward approach combination in which the rearward approach PWM signal voltage is applied to an odd-numbered scanning electrode and the forward approach PWM signal voltage is applied to an even-numbered scanning electrode

30 or a forward/rearward approach combination in which the forward approach PWM signal voltage is applied to the odd-numbered scanning electrode and the rearward approach PWM signal voltage is applied to the even-numbered scanning electrode.

35 8. The display device according to claim 5 or 6, wherein the signal side driving portion and the scanning side driving

portion synchronize and alternate the PWM signal voltage and a scanning voltage to be applied to the scanning electrode to have a predetermined relationship with a frame cycle.

5 9. A display driving method of a simple matrix display for performing a PWM control,

wherein numbers of signal electrodes to which a forward approach PWM signal voltage is to be applied and signal electrodes to which a rearward approach PWM signal voltage is to be applied
10 are set to be almost equal to each other for each scanning period in which scanning electrodes are sequentially scanned.

15 10. The display driving method according to claim 9, wherein the signal electrode to which the forward approach PWM signal voltage is to be applied and the signal electrode to which the rearward approach PWM signal voltage is to be applied are alternately.

20 11. The display driving method according to claim 9 or 10, wherein the PWM signal voltage is applied to have a rearward/forward approach combination in which the rearward approach PWM signal voltage is applied to an odd-numbered scanning electrode and the forward approach PWM signal voltage is applied to an even-numbered scanning electrode or a
25 forward/rearward approach combination in which the forward approach PWM signal voltage is applied to the odd-numbered scanning electrode and the rearward approach PWM signal voltage is applied to the even-numbered scanning electrode.

30 12. The display driving method according to claim 9 or 10, wherein the PWM signal voltage and a scanning voltage to be applied to the scanning electrode are alternated synchronously to have a predetermined relationship with a frame cycle.

35 13. A display device comprising:
a simple matrix display provided with a plurality of signal

electrodes and a plurality of scanning electrodes which are orthogonal to each other with an electrostatic capacity coupling display unit interposed therebetween;

5 a scanning side driving portion for sequentially scanning the scanning electrodes and supplying a scanning voltage; and a signal side driving portion for supplying a PWM signal voltage to be a forward approach PWM signal voltage or a rearward approach PWM signal voltage to each of the signal electrodes synchronously with the scan of the scanning side driving portion,

10 wherein the signal side driving portion applies the forward approach PWM signal voltage to an almost half number of signal electrodes and applies the rearward approach PWM signal voltage to the residual signal electrodes for each scanning period in which the scanning electrodes are sequentially scanned.

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14. The display device according to claim 13, wherein the signal side driving portion alternately sets the signal electrode to which the forward approach PWM signal voltage is to be applied and the signal electrode to which the rearward approach PWM signal voltage is to be applied.

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15. The display device according to claim 13 or 14, wherein the signal side driving portion applies the PWM signal voltage to have a rearward/forward approach combination in which the rearward approach PWM signal voltage is applied to an odd-numbered scanning electrode and the forward approach PWM signal voltage is applied to an even-numbered scanning electrode or a forward/rearward approach combination in which the forward approach PWM signal voltage is applied to the odd-numbered scanning electrode and the rearward approach PWM signal voltage is applied to the even-numbered scanning electrode.

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16. The display device according to claim 13 or 14, wherein the signal side driving portion and the scanning side driving portion synchronize and alternate the PWM signal voltage and a scanning voltage to be applied to the scanning electrode

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to have a predetermined relationship with a frame cycle.